

Abstract

It is an object of the present invention to provide a radio-astronomical medium polarization having a stable performance that does not require a translation for an required place, especially, the influence of a metallic structure does not need to adjust the reflection frequency of an antenna or an impedance, is excellent, in its conversion and extensibility upon installation and using; the unbalance noise from a periphery, in electric current fed loop antenna units, non-electric current fed loop antenna are arranged in daughter-shares outside the substantially same plane, of electric current fed loop antenna so as to surround the electric current fed loop antenna. Thus, when non-electric current fed loop antenna units are installed linearly, in radial directions and in arrays, differently to electric current fed loop antenna units, the influence of the non-electric current fed loop antenna units to the antenna characteristics of the electric current fed loop antenna units can be suppressed. When the non-electric current fed loop antenna units are expanded and increased, the influence of the electric current fed loop antenna units do not need to be adjusted.